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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/731,904 | 12/08/2000 | Koichiro Kishima | SON-2029 | 1187 |

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WASHINGTON, DC 20036

EXAMINER

FERGUSON, LAWRENCE D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1774

DATE MAILED: 11/08/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,904

Applicant(s)

KISHIMA ET AL.

Examiner

Lawrence D Ferguson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 19-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 36 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed October 11, 2002.
Claim 12 was amended, rendering claims 1-18 and 35-41 pending with claims 19-34 held to a non-elected invention. Examiner regrets the untimely reopening of the case.

Claim Rejections – 35 USC § 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-17, 35 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakubo et al. (U.S. 5,972,459) in view of Araki et al (U.S. 6,166,856) further in view of Yamada et al (U.S. 5,635,267).
4. Kawakubo discloses an optical recording medium with a reflective film, a phase-change recording layer and a light transmissive layer (abstract and column 2, lines 18-28) along with forming the film layer by sputtering (column 3, lines 1-2) and the recording medium is for recording and/or reproducing (column 3, lines 65-66). The reference discloses the structure is irradiated with laser light (column 7, lines 18-19) with the recording medium comprising a convex portion, concave portion and flat portion (column 7, lines 25-29). Kawakubo discloses a dielectric layer formed on the substrate

(column 8, line 43-46) with the film comprised of inorganic material such as ZnS and SiO₂ (column 8, lines 48-52). The optical recording medium having protrusions eliminated that damage an optical system disposed in the proximity of and in opposition to the surface of the light recording medium and performs the irradiation of light is a product by process. Additionally, the formation temperature is a product by process claimed limitation as well. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966. Kawakubo does not disclose the film thickness. Thickness is an optimizable feature that is not result effective. It would have been obvious to one of ordinary skill in the art to optimize the components because discovering an optimum or workable range is of routine skill in the art. Kawakubo does not disclose the light transmission flattenable film including a backing layer, light transmitting flattenable layer and a surface layer. Araki teaches a flattenable light transmitting film including a backing layer, light transmitting layer and a surface layer (column 2, lines 50-67). Kawakubo and Araki are analogous art because they are from the same field of light transmitting layers. It would have been obvious to one of ordinary skill in the art to include the backing and surface layers in the light transmissive layer of Kawakubo because Araki teaches these layers help maintain the integrity of the transmitting film by keeping the film sealed (column 2, lines 54-60).

Kawakubo does not disclose spin-coating or changing from an amorphous state to a crystalline state.

Yamada teaches a recording medium with a recording layer having a concavo-convex surface (abstract) where a laser beam irradiates a recording medium (column 5, lines 58-60). Yamada teaches a polishing process of the recording medium produced by spin coating (column 10, lines 60-65) and has reversible phase-changing between the amorphous and crystalline states (column 12, lines 14-18). Kawakubo, Akari and Yamada are analogous art because they are from the same field of information multilayered light emitting materials. It would have been obvious to one of ordinary skill in the art to include the polishing process and spin-coating features in the recording medium of Kawakubo because Yamada teaches the polishing helps smooth out the surface from unevenness and the spin coating helps protect the information recording medium from environmental hazards. It would have also been obvious to one ordinary skill in the art to include the recording layer phase change material changing from an amorphous state to a crystalline state because Yamada teaches this is conventional within the art. Neither reference explicitly teaches hardness. Because the references have the same components with the same function as the claimed invention, it would have been expected for the layer to have a hardness, as claimed.

Claim Rejections – 35 USC § 103(a)

5. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over Kawakubo et al. (U.S. 5,972,459) in view of Araki et al (U.S. 6,166,856) in view of Yamada et al (U.S. 5,635,267) further in view of Sekiya et al (U.S. 5,614,287).

6. Kawakubo, Araki and Yamada are relied upon for claims 1-4 and 6-17.

Kawakubo does not disclose the substrate made out of organic material or magnetic material.

Sekiya teaches an optical recording medium with a recording layer, convex or concave configuration formed on the substrate (abstract) where the substrate is made of organic material (column 2, lines 21-25). Sekiya teaches the optical recording medium being magnetic. All of the references are analogous art because they are from the same field of recording media. It would have been obvious to include the organic material in the substrate of the recording medium of Kawakubo because the organic material increases the recording quality of the optical recording medium. Although none of the references teach the state of magnetization changed by the irradiation of light, this is a product by process claimed limitation. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966.

7. Claims 36 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's traversal to 35 USC 112, second paragraph have overcome the rejection and the rejection(s) have been withdrawn in regards to the term 'high' because the indefinite claim language of claim 12 has been removed via amendment.

Applicant's arguments of rejection under unpatentable over Kawakubo et al. (U.S. 5,972,459) in view of Yamada et al (U.S. 5,635,267) and Kawakubo et al. (U.S. 5,972,459) in view of Yamada et al (U.S. 5,635,267) further in view of Sekiya et al (U.S. 5,614,287) have been considered moot based on new grounds of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for

Application/Control Number: 09/731,904

Page 7

Art Unit: 1774

After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

LDF

Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Cynthia H. Kelly